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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,578	04/15/2004	Andrew Aaron	728-242	8668

66668 7590 10/01/2009

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EXAMINER	
NEWAY, SAMUEL G	

ART UNIT	PAPER NUMBER
2626	

MAIL DATE	DELIVERY MODE
10/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,578	AARON ET AL.	
	Examiner	Art Unit	
	SAMUEL G. NEWAY	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-15 and 18-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-15 and 18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is responsive to the RCE filed on 13 July 2009.

2. Claims 1-7, 9-15, and 18-23 remain pending and are considered below.

Response to Amendment

3. The rejection of claims 9-15 under 35 USC § 101 is withdrawn in view of Applicant's amendments.

Response to Arguments

4. Applicant's arguments with respect to claims 1-7, 9-15, and 18-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-3, 9-11, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brittan et al (US PGPub 2002/0184030) in view of Silverman (USPN 5,652,828) and in further view of Luther (USPN 5,500,919).

Claim 1:

Brittan discloses a method for improving the intelligibility of speech output by a speech synthesizer (Abstract), the method comprising acts of:

determining if at least one uncommon word exists in a text; and if it is determined that an uncommon word exists in the text, marking the text to identify the uncommon word ("the language generator 23 can be arranged to ... insert pauses in front of certain words", [0063] to [0065]. Note that the language generator processes and outputs text, see Fig. 4 item 23 and related text), outputting synthesized speech by the speech synthesizer (Fig. 4, item 6 and related text) by inserting a first pause before ("insert pauses in front of certain words", [0065]) and a second pause after ("a pause inserted at the end of the dubious utterance", [0090]) the output of the synthesized speech of the uncommon word to offset the uncommon word from its surrounding speech ("insert pauses in front of certain words, such as non-dictionary words and other specialized terms and proper nouns (there being a natural human tendency to do this)", [0065]. Note that the non-dictionary words, the specialized terms, and the proper nouns are determined before a pause is inserted).

Brittan does not explicitly disclose inserting a third pause within the output of the synthesized speech of the uncommon word to increase the duration of the uncommon word by uttering the uncommon word in at least two uttered portions separated by the at least one third pause.

In a similar speech synthesis method, Silverman discloses inserting a pause within the output of a synthesized word, inherently increasing the duration of the word, by uttering (spelling out) the uncommon word in at least two spelled out portions

separated by the at least one third pause. ("Thus for example "Silverman" is often spelled out as "S-I-L, V-E-R, M-A-N". These groups are separated from each other by insertion of a slight pause", col. 12, lines 53-60).

It would have been obvious to one with ordinary skill in the art at the time of the invention to insert a pause in the output of Brittan's synthesized uncommon word in order to provide more natural synthesized speech (Silverman, col. 12, line 66 to col. 13, line 4).

Neither Brittan nor Silverman explicitly disclose where the spelled out portions of the uncommon word are pronounced.

In a similar text-to-speech method, Luther discloses giving a user the option of spelling out or pronouncing uncommon words (col. 5, lines 4-6).

It would have been obvious to one with ordinary skill in the art at the time of the invention to have used Luther's disclosure to either spell out or pronounce Silverman's synthesized word, thereby either spelling out or pronouncing the portions separated by pauses, in order to provide a versatile system where a user is able to select whether uncommon words are spelled out or pronounced by a text-to-speech system (see Luther, col. 5, lines 4-6).

Claim 2:

Brittan, Silverman, and Luther disclose the method of claim 1, Brittan further discloses wherein the determination is made by comparing the input text to common words stored in a database and determining if a word is uncommon if the word is not in the database (" ... such as non-dictionary words ... ", [0065]).

Claim 3:

Brittan, Silverman, and Luther disclose the method of claim 1, Brittan further discloses wherein a word is determined as uncommon if the word is capitalized ("... proper nouns ...)", [0065]).

Claims 9-11:

System claims 9-11 and method claims 1-3 are related as system and the method of using same, with each claimed element's function corresponding to the claimed method step. Accordingly claims 9-11 are rejected with the same rationale as applied above with respect to method claims 1-3.

Claims 18 and 19:

Brittan, Silverman, and Luther disclose the methods of claims 1 and 3. Luther further discloses a computer-readable medium encoded with software instructions for performing method steps (col. 2, line 61 to col. 3 line 1).

Implementing the method of claims 1 and 3 as software on Luther's computer readable medium would be an obvious modification to one of ordinary skill in the art of speech synthesis, at the time of applicant's invention, so as to facilitate loading the software onto a computer to perform the steps of the method claims.

Accordingly, claims 18 and 19 are rejected with the same rationale as applied above with respect to method claims 1 and 3.

7. Claims 4-7, 12-15, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brittan et al (US PGPub 2002/0184030) in view of Silverman (USPN

5,652,828) in further view of Luther (USPN 5,500,919) and in further view of Lu et al (USPN 5,819,260).

Claims 4 and 5:

Brittan, Silverman, and Luther disclose the method of claim 1, but they do not explicitly disclose wherein the determination is made by using a statistical language model which compares a calculated value with a threshold value and if the calculated value is less than the threshold value the word is determined as uncommon.

In a phrase recognition method, similar to Brittan's word determination, Lu processes phrases to determine frequency of occurrence (col. 4, lines 14-15).

It would have been obvious to one with ordinary skill in the art at the time of the invention to determine the frequency of occurrence of a word and label it as uncommon if the frequency is below a threshold because, by definition, uncommon words are rare.

Claims 6 and 7:

Brittan, Silverman, and Luther disclose the method of claim 1, but they do not explicitly disclose wherein the determination is made by using a prediction algorithm which compares a calculated value with a threshold value and if the calculated value is less than the threshold value the word is determined as uncommon.

In a phrase recognition method, similar to Brittan's word determination, Lu processes phrases to determine frequency of occurrence (col. 4, lines 14-15).

It would have been obvious to one with ordinary skill in the art at the time of the invention to determine the frequency of occurrence of a word and label it as uncommon if the frequency is below a threshold because, by definition, uncommon words are rare.

Claims 12-15:

System claims 12-15 and method claims 4-7 are related as system and the method of using same, with each claimed element's function corresponding to the claimed method step. Accordingly claims 12-15 are rejected with the same rationale as applied above with respect to method claims 4-7.

Claims 20-23:

Brittan, Silverman, and Luther disclose the methods of claims 4-7. Luther further discloses a computer-readable medium encoded with software instructions for performing method steps (col. 2, line 61 to col. 3 line 1).

Implementing the method of claims 4-7 as software on Luther's computer readable medium would be an obvious modification to one of ordinary skill in the art of speech synthesis, at the time of applicant's invention, so as to facilitate loading the software onto a computer to perform the steps of the method claims.

Accordingly, claims 20-23 are rejected with the same rationale as applied above with respect to method claims 4-7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMUEL G. NEWAY whose telephone number is (571)270-1058. The examiner can normally be reached on Monday - Friday 8:30AM - 5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R Hudspeth/
Supervisory Patent Examiner, Art Unit 2626

/S. G. N./
Examiner, Art Unit 2626